Indiana Traffic Safety Facts 2004

Children

http://www.in.gov/cji

In the year 2004, the 1.4 million Indiana children under the age of 16 made up 22.9 percent of the state's population (6.2 million). Nationally, there were 65.0 million children under 16 in the United States, of which 2.2 percent resided in Indiana.[1]

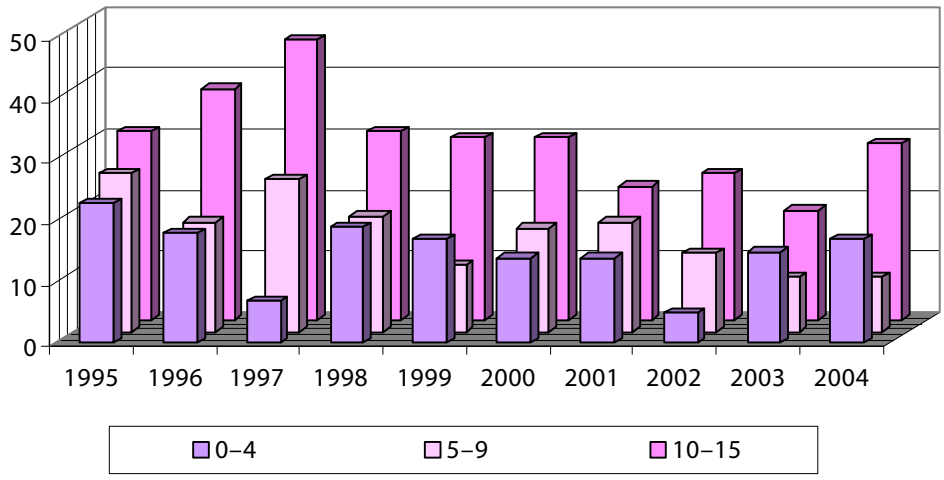
In 2004, there were 947 traffic-related fatalities in Indiana, and the under 16-year-old age group accounted for 5.8 percent (55) of those fatalities, just slightly below the national figure of 6.1 percent. Children under the age of 16 accounted for 5.4 percent (46) of all vehicle occupant fatalities in Indiana (858), compared to 5.5 percent in the U.S. One child died in an Indiana crash every 6.6 days in 2004.

The number of traffic fatalities among children 10–15 years of age has decreased 37 percent since 1997.

Males accounted for 61.8 percent (34 of 55) of child occupant and non-occupant fatalities (under the age of 16) in Indiana. In contrast, males in this age group accounted for 56.4 percent of the fatalities in the U.S. For children under the age of 16, 15-year-olds had the highest incidence rate of child fatalities both nationally and in Indiana, constituting 17.2 percent and 18.2 percent repectively of all traffic fatalities below the age of 16.

As seen in Figure 1, the total number of traffic fatalities among children 10–15 years of age (29) has decreased considerably from a decade high of 46 in 1997 to 29 in 2004. Among children 5–9 years of age, the annual number of Indiana traffic fatalities has decreased from 26 fatalities in 1995 to 9 in 2004. The number of fatalities among the 0–4 age group has made very little improvement over the past 10 years.

Figure 1. Total Traffic Fatalities Among Children 0–15 Years Old by Age Group for Indiana, 1995–2004



Blood alcohol content in drivers is negatively correlated with the use of restraints for child passengers.

Child Endangerment

The National Center for Health Statistics for 2001 reports that motor vehicle crashes are the leading cause of death for children 2–14 years old in the U.S.[2] A study published in the *Journal of the American Medical Association* in 2000 indicated that nearly 24 percent of children 0–14 years old who died in motor vehicle crashes in the U.S. between 1985 and 1996 were killed in alcohol-related crashes.

[1] Indiana's census by age for 2004 was derived using population growth estimates based on data available at http://factfinder.census.gov/ and http://quickfacts.census.gov/.

[2] National Center for Health Statistics (NCHS) Vital Statistics System. "National Mortality Data, 2001." Hyattsville (MD): NCHS 2004.

Of these deaths, 64.0 percent of the children were riding in a vehicle whose driver had been drinking at the time of the crash. Additionally, blood alcohol content in drivers is negatively correlated with the use of restraints for children.[3] (As the drivers' level of intoxication increased, the level of restraint use for their child passengers decreased).

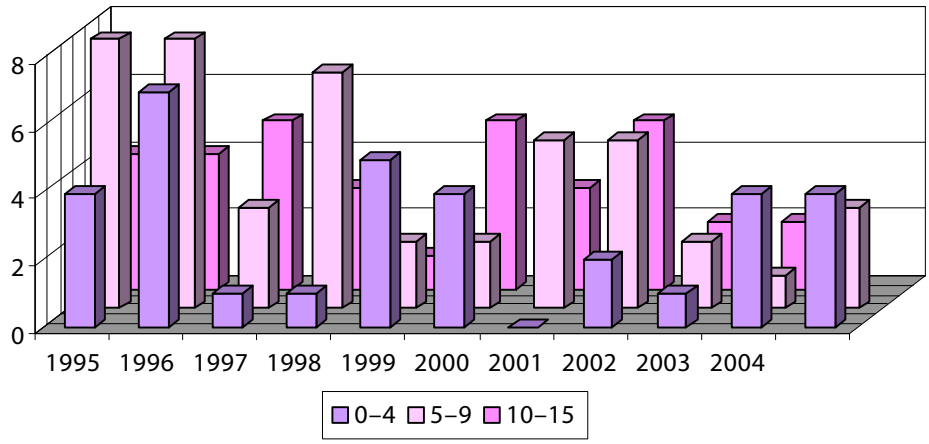
Of the 11 children killed in alcohol-related crashes, 6 were passengers in the same vehicle as the impaired driver.

In 2004 in Indiana, there were 11 children killed in alcohol-related crashes[4], representing 20 percent of all child fatalities for the year. Six of the killed children were passengers in a vehicle driven by a driver who was impaired at the time of the crash.

Pedestrians

Nationally, there was a 47.3 percent decrease in pedestrian fatalities among the 0–15-year-old age group from 1995–2004. Indiana had a 52.6 percent decrease, as it went from 19 child pedestrian fatalities in 1994, to 9 child pedestrian fatalities in 2004. While the number of actual fatalities (by age group) varies widely from year to year, the general trend has been a favorable decline over the last 10 years. Five of the nine fatalities occurred in rural areas. All 9 fatalities were male children.

Figure 2. Total Pedestrian Fatalities Among Children 0–15 Years Old by Age Group for Indiana, 1995–2004



Of the 73 pedestrian fatalities in Indiana for 2004, the 0–15 age group represented 12.3 percent (9) of those fatalities (all male).

Pedalcyclists

In 2004, 12 out of 13 of the pedalcyclists killed in Indiana motor vehicle crashes were male, and none of them was below the age of 16. Nationally, 8 were below 5 years of age; 21 were below 7; and 62 were below 11. Nationally in 2004, children comprised 20.6 percent of the total pedalcyclist fatalities in motor vehicle crashes.

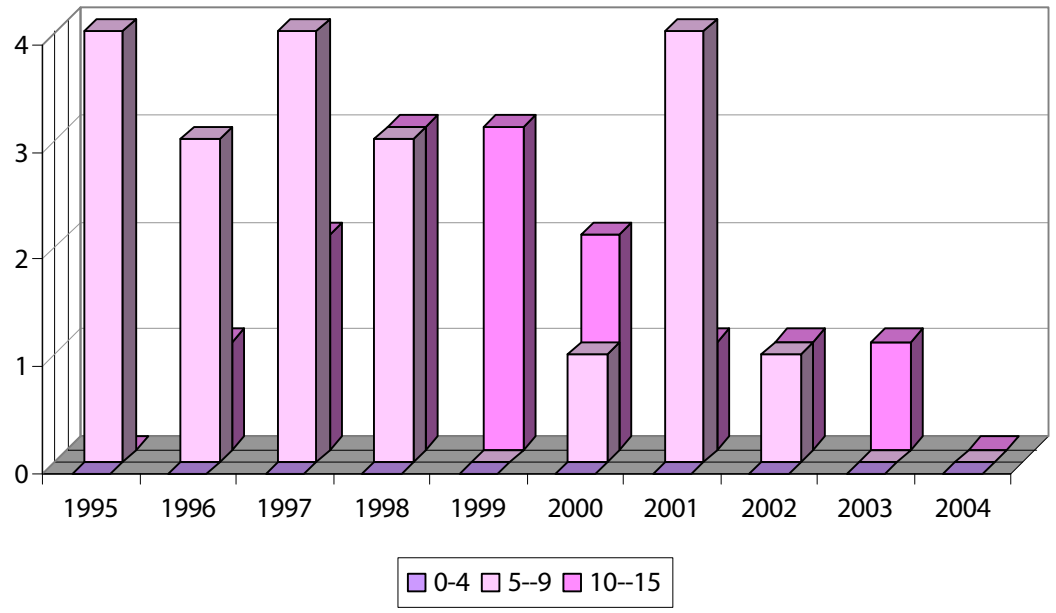
There were no child motor vehicle-related pedalcyclist deaths in 2004.

The percentage of child pedalcyclist fatalities in Indiana (1.4 percent) is slightly lower than the national figure (1.7 percent) and represents a decreasing trend, especially among children 5–9 years of age.

According to the Center for Disease Control (CDC), pedalcycle riders should wear a helmet every time they ride.[5] However, despite the fact that helmets are 85 percent effective in reducing serious head injuries, only about 25 percent of children ages 5–14 wear them.

[3] Quinlan KP, Brewer RD, Sleet DA, Dellinger AM. "Characteristics of child passenger deaths and injuriesinvolving drinking drivers." *JAMA* 2000; 283(17): 2249–52.
[4] An alcohol-related crash is defined as a vehicle crash involving at least one driver or non-occupant with a blood alcohol concentration (BAC) level of .01 gram per deciliter (g/dl) or higher.
[5] National Center for Disease Control "Preventing Bicycle-Related Head Injuries." Available on the Internet at http://www.cdc.gov/ncipc/factsheets/bikehel.htm.

Figure 3. Number of Pedalcyclist Fatalities Among Children 0–15 Years Old by Age Group for Indiana, 1995–2004



Restraints

Of the 13 fatally injured children age 0–4, 7 were properly restrained in a child safety seat.

The National Highway Traffic Safety Administration (NHTSA) cites research stating that lap/shoulder belts, when used by front seat occupants (age 5 and older), reduce the risk of fatal injury by 45 percent in passenger cars, and 60 percent for light trucks.[6]

Table 1. Restraint Use by Passenger Vehicle Occupant Fatalities in Crashes by Age Group for Indiana, 2004

Restraint Use	Age Group (Years)					
	0–4	5–9	10–15	16–20	21+	Total
Proper	8	3	11	50	218	290
Not Proper	6	3	7	56	253	325
Unknown	0	0	4	21	72	97*

*There was one occupant of unknown age that is excluded.

During 2004 in Indiana, there were 171 passengers under the age of 16 in fatal passenger vehicle crashes. Where the restraint use was known for these crashes, 36.3 percent (57 of 160) were not properly restrained. Of the 37 (of 41) passenger fatalities younger than 16 years old in passenger vehicles whose restraint was known, 40.5 percent (16) of them were not properly restrained, compared to the 53.5 percent of killed occupants not properly restrained in the nation. There were no fatally injured children riding in pickup trucks in 2004. Of the 13 fatally injured children age 0–4, only 7 were properly restrained in a child safety seat. Four of the twelve fatally injured children, riding in the front seat of passenger cars, were completely unrestrained.

72.6 percent of the child restraints inspected were improperly used.

NHTSA reports that child safety seats are found to reduce fatal injury by 71 percent for children under 1 year old, and 54 percent for children 1–4 years old in passenger cars. The corresponding figures for light trucks are 58 percent and 59 percent, respectively. In Indiana in 2004, there were 13 passenger vehicle occupant fatalities under the age of 5 (see Table 2). Of the 13 fatalities whose restraint status was known, 5 child was unrestrained, 1 improperly restrained in a child seat, and 7 child passengers were fatally injured while riding in a child safety seat.

[6] Restraint safety information taken from the National Highway Traffic Safety Administration's "Traffic Safety Facts 2000, Children." This document is available online at http://www.nhtsa.dot.gov.

The rate of child passenger fatalities in vehicles driven by drivers who had consumed alcohol is lower in Indiana than the rest of the nation.

Table 2. Children Under 5 Years Old Fatally Injured in Passenger Vehicle Crashes by Age Group and Type of Restraint for Indiana, 2004*

Type of Restraint	Infants (Under Age 1)	Toddlers (Age 1-4)	Total
None Used	0	5	5
Child Seat	3	5	8
Adult Safety Belt	0	0	0
Unknown	0	0	0

*Excludes 4 pedestrians.

NHTSA reports that between 1975 and 2003, 7,020 lives were saved by the use of child restraints. However, based on a 2002 study of child seat misuse in six states, 72.6 percent of the child restraints inspected had one or more critical errors per restraint. Rear-facing child safety seats, used for newborns and infants, had 83.9 percent overall incorrect use, while forward-facing child safety seats were at 81.9 percent incorrect use.

The most frequent problems in these seats were listed as follows: failure of the harness straps to snugly restrain the child, failure of the safety belt to tightly lock the seat in the vehicle, improper positioning of the harness retainer clip for the rear-facing seats and incorrect use of a top tether strap for forward facing seats.

Conclusion

The death of a child as a result of a traffic crash is not only a tragic loss of life, it is also a traumatic and unnecessary event when that death is caused by an irresponsible driver. Indiana has made the greatest progress in reducing child fatalities in the 10–15-year-old age category over the last 10 years. However, minimal progress has been made in reducing the number of child fatalities in the 0–4- and 5–9-year-old age groups. Overall, both Indiana and national figures for child pedestrian fatalities are decreasing at similar rates.

Indiana has a slightly lower percentage of child traffic fatalities involving alcohol (20 percent) than the national average for 2004 (21 percent). Drunk drivers contributed to the death of at least 11 children in Indiana, 6 of which were occupants in the drinking driver's vehicle. While drunk driving remains a crucial threat to Indiana children's safety, increased law enforcement and driver education concerning proper safety restraint use may be the most effective way to improve child passenger safety.

While the state of Indiana is proactive in encouraging drivers to buckle their child passengers, the maximum penalty remains at $25 for a child restraint violation, and/or the possibility of having 4 points added to the violator's driver's license. Indiana continues to see fatalities due to the lack of use and the lack of proper use of seat belts and child seats. During the 2003–2004 Indiana Legislative Session, state lawmakers passed a child restraint enhancement bill that requires all children to be properly restrained in a child restraint system meeting FMVSS 213 until 8 years of age, but revoked the four points that could have been assessed.

Further, all children between the ages of 8 and 16 riding in a motor vehicle must be in a child restraint or seat belt, including pickup trucks and vehicles plated as pickup trucks. Although the new child restraint law did not go into effect until July 1, 2005, child safety advocates made every effort to educate parents and caregivers on the safety aspects associated with using booster seats immediately, instead of delaying properly restraining their children until they face the possibility of legal consequences for not placing their children in booster seats in the future.

This publication was prepared on behalf of the Indiana Criminal Justice Institute by Purdue University's Center for the Advancement of Transportation Safety. All information contained within was gathered from the Fatality Analysis Reporting System (FARS) Web-Based Encyclopedia provided by the National Highway Traffic Safety Administration (NHTSA) available at http://www.fars.nhtsa.dot.gov. All figures are considered current as of September 2005. Please direct any questions concerning data in this document to the Center for the Advancement of Transportation Safety, Purdue University, 1291F Cumberland Ave.,West Lafayette, IN, 47906-1385, (765) 494-7038.